

CLAIMS

What is claimed is:

1. A method for multimedia display in a mobile device comprising:
receiving an encoded multimedia display command encoded within a multimedia link
interface protocol, the encoded multimedia display commands including a
command type code and an operation code;
decoding the encoded multimedia display command to generate a multimedia display
command by retrieving the multimedia display command as referenced by the
command type code and the operation code; and
executing the multimedia display command.
2. The method of claim 1 wherein the command type code is utilized to determine if
the encoded multimedia display command is at least one of the following: a type_zero command
and a type_one command.
3. The method of claim 2 wherein the operation code is utilized to determine if the
encoded multimedia display command is at least one of the following: a read command, a write
command, a response command and a reset command.
4. The method of claim 3 wherein when the encoded multimedia display command
is the type_zero command, the encoded multimedia command further includes a byte_length data
packet and a byte_address data packet.
5. The method of claim 3 wherein when the encoded multimedia display command
is the type_one command, the encoded multimedia command further includes a client identifier,
the method further comprising:
accessing a lookup table using the client identifier as an index.

6. The method of claim 3 wherein the type_one command has a smaller bit length than the type_zero command.

7. The method of claim 1 wherein the encoded multimedia display command is received from a central processing unit across a bi-directional bus.

8. The method of claim 1 wherein the command type code is a single bit data value and the operation code is a double bit data value.

9. The method of claim 1 further comprising:

generating a multimedia output display; and

providing the multimedia output display to a display device.

10. An apparatus for multimedia display in a mobile device comprising:
a multimedia processor capable of generating a multimedia display output;
a multimedia display buffer coupled to the multimedia processor;
a camera interface coupled to the multimedia processor such that the processor is capable
of receiving a captured image from a camera; and
a multimedia link interface capable of receiving an encoded multimedia display
command encoded in a multimedia link interface command protocol and
generating therefrom a multimedia display command capable of being performed
by the multimedia processor such that the multimedia processor can generate the
multimedia display output and provide the multimedia display output to a display
device.

11. The apparatus of claim 10 wherein the encoded multimedia display command
includes a command type code and an operation code such that the command type code is at least
one of following: a type_zero command and a type_command and the operation code is at least
one of the following: a read command, a write command, a response command and a reset
command.

12. The apparatus of claim 11 wherein when the encoded multimedia display
command is the type_zero command, the encoded multimedia command further includes a
byte_length data packet and a byte_address data packet and when the encoded multimedia
display command is the type_one command, the encoded multimedia command further includes
a client identifier.

14. The apparatus of claim 13 further comprising:

a lookup table operably coupled to the multimedia link interface such that the multimedia link interface may access the lookup table using the client identifier.

15. The apparatus of claim 10 wherein the multimedia link interface is operably coupleable to a central processing unit across a bus such that the encoded multimedia display command is received from the central processing unit and across the bi-directional bus.

16. The apparatus of claim 10 wherein the multimedia link interface operates in at least one of: a master/slave mode and a master/master mode.

17. A mobile device comprising:

a central processing unit capable of generating an encoded multimedia display command;

a camera capable of acquiring a captured image

a multimedia processing device operably coupled to the camera and to the central processing unit across a bi-directional bus, the multimedia processing device including:

a multimedia processor capable of generating a multimedia display output;

a multimedia display buffer coupled to the multimedia processor;

a camera interface coupled to the multimedia processor such that the processor is capable of receiving the captured image from the camera; and

a multimedia link interface capable of receiving the encoded multimedia display command from the central processing unit, wherein the encoded multimedia display command is encoded in a multimedia device link command protocol such that the multimedia processor decodes and executes the encoded multimedia display command; and

an output device operably coupled to the multimedia processing device such that the output device receives a multimedia display output from the multimedia processing device for display thereupon.

18. The mobile device of claim 17 further comprising:

a baseband receiver operably coupled to the central processor for receiving and transmitting mobile communications thereacross.

19. The mobile device of claim 17 wherein the encoded multimedia display command includes a command type code and an operation code such that the command type code is at least

one of following: a type_zero command and a type_command and the operation code is at least one of the following: a read command, a write command, a response command and a reset command.

20. The mobile device of claim 19 wherein when the encoded multimedia display command is the type_zero command, the encoded multimedia command further includes a byte_length data packet and a byte_address data packet and when the encoded multimedia display command is the type_one command, the encoded multimedia command further includes a client identifier.

21. The mobile device of claim 20 further comprising:

a lookup table operably coupled to the multimedia link interface such that the multimedia link interface may access the lookup table using the client identifier.

22. The mobile device of claim 17 wherein the display device includes a bitmap memory such that the multimedia processor can provide the multimedia display output to the display device at a display rate capable of producing a flicker free display.

23. The mobile device of claim 16 wherein the central processing unit includes a multimedia display command encoder such that the central processing unit may encode the encoded multimedia command in accordance with the multimedia device interface command protocol.

24. The mobile device of claim 17 wherein the multimedia link interface operates in at least one of: a master/slave mode and a master/master mode.

25. A method for multimedia display interfacing in a mobile device comprising:
receiving an encoded multimedia display command encoded within a multimedia link
interface protocol, the encoded multimedia display command including a
command type code and an operation code, wherein the command type code is
utilized to determine if the encoded multimedia display command is at least one
of the following: a type_zero command and a type_one command and the
operation code is utilized to determine if the encoded multimedia display
command is at least one of the following: a read command, a write command, a
response command and a reset command;
decoding the encoded multimedia display command to generate a multimedia display
command, as referenced by the command type code and the operation code,
wherein when the encoded multimedia display command is the type_zero
command, the encoded multimedia command further includes a byte_length data
packet and a byte_address data packet and when the encoded multimedia display
command is the type_one command, the encoded multimedia command further
includes a client identifier;
accessing a lookup table using the client identifier as an index; and
executing the multimedia display command.

26. The method of claim 25 wherein the type_one command has a smaller bit length
than the type_zero command.

27. The method of claim 25 wherein the encoded multimedia display command is
received from a central processing unit across a bus.

28. The method of claim 25 wherein the command type code is a single bit data value and the operation code is a double bit data value.

29. The method of claim 25 further comprising:
generating a multimedia output display; and
providing the multimedia output display to a display device.

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